

Integration of geriatric oncology in daily multidisciplinary cancer care: the time is now

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There is an increasing number of older patients with cancer as a logical consequence of a longer life span which promotes prolonged exposure to carcinogens and accumulation of genetic alterations. In addition, the Western world is currently facing an unprecedented demographic change resulting in ageing populations (Repetto & Balducci 2002). Practitioners and health-care professionals are faced with the difficult task to manage these older cancer patients in their routine clinical practices, and to select the proper tailored treatment and care. Difficulties arise as they have to answer challenging questions such as: Will the cancer treatment do more harm than good when considering quality of life? Will they be able to tolerate their treatment at full doses or will dose reductions be necessary? Will the patient die due to their cancer diagnosis or due to a co-existing morbidity? Is a treatment with curative intent possible or do we need to opt for supportive care? (Monfardini & Balducci 1999; Balducci 2000)

These questions illustrate the heterogeneity of older patients – and they are a group in which chronological and functional age may not correspond. The spectrum of impairment can range from those who are independent, to those who are at moderate risk of health deterioration, and those who are at a high risk of functional decline or mortality (Mohile *et al.* 2007). Therefore, proper selection of patients is the key to administering a safe and effective cancer treatment (Hurria *et al.* 2014).

The history of modern evidence-based ‘geriatric oncology’ dates back to the time around 1990 when geriatricians developed and validated a holistic approach to assess older patients (Reuben *et al.* 1999). Their comprehensive geriatric assessment (CGA) is a multidisciplinary, in-depth evaluation to assess life expectancy and the risk of morbidity and mortality (Extermann & Hurria 2007; Hurria *et al.* 2014). Its benefits include amelioration of subjects’ well-being, prevention of geriatric syndromes or institutionalisation, and prolongation of life (Rubenstein *et al.* 1984; Stuck *et al.* 1993; Tinetti *et al.* 1994; Cohen *et al.* 2002).

The first attempt to adapt the CGA for use in an oncology setting was made by Monfardini *et al.* (1996). The efficacy of their tool was later prospectively evaluated in a large sample of older cancer patients by the Italian Group

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of Geriatric Oncology from 1995 to 1998 (Repetto & Balducci 2002; Repetto *et al.* 2002). Around the beginning of the new century, clinical studies validated the importance of the use of a CGA in routine oncology practice (Monfardini & Balducci 1999; Extermann & Hurria 2007). A trial including 660 women diagnosed with primary breast cancer showed that the domains included within a CGA are associated with poor treatment tolerance and predict mortality at 7 years of follow-up (Clough-Gorr *et al.* 2010). Another landmark study in elderly patients with ovarian cancer illustrated that functional dependence, as assessed with a CGA, is associated with a risk of chemotherapy toxicity (Freyer *et al.* 2005). Decoster *et al.* (2013) showed that CGA influences oncological treatment decisions and may trigger the use of less aggressive as well as more aggressive treatments (Decoster *et al.* 2013). Moreover, a trial conducted in head and neck cancer patients illustrated that a CGA provides an indication of the health-related quality of life (QoL). With this information, physicians could tailor care and thus improve patients' QoL (Pottel *et al.* 2014).

Through efforts made during the last decade, tremendous progress has been made towards the optimisation of comprehensive geriatric assessments in routine multidisciplinary cancer care (Pottel *et al.* 2014; Sattar *et al.* 2014). Researchers have also conducted trials on the most optimal screening tool to detect those patients in need of a CGA (Kenis *et al.* 2013; Soubeyran *et al.* 2014). Others have proposed and validated new measures for use within the assessment (Ketelaars *et al.* 2013; Lycke *et al.* 2014). As a result, a CGA has been endorsed as the key treatment approach in older cancer patients, by several international expert panels. These include: the National Comprehensive Cancer Network, the European Organisation for Research and Treatment of Cancer, and the Society of Geriatric Oncology (Pallis *et al.* 2010; Decoster *et al.* 2014; Hurria *et al.* 2014; Wildiers *et al.* 2014). Current senior adult oncology care guidelines can be consulted on their respective websites (<http://www.nccn.org>; <http://www.eortc.org>; <http://www.siog.org>). Despite the growing evidence, there remains high variability among countries and centres in the application of the guidelines, mainly because of shortage of staff and other economic and institutional constraints (Jonker *et al.* 2014). Several specialised 'geriatric oncology' units are being established, but since cancer is a disease of older people, we believe that a geriatric evaluation and geriatric interventions should become available to all older individuals affected by cancer.

Looking beyond oncology settings, elderly patients with cancer need community-based care which complements

their specialist treatments. Primary care features, to a growing extent, in new models of cancer treatment and survivorship, and there is evidence of increasing involvement with elderly cancer patients (Bowman *et al.* 2010). Accordingly, there are widespread calls for the care of elderly patients with cancer to be better integrated between primary and secondary care (Buntinx *et al.* 2014); these patients will typically have multiple comorbidities requiring both generalist and specialist approaches. With this 'Ageing and Cancer' themed issue, the European Journal of Cancer Care wants to support researchers who aim to move geriatric oncology forward (Debruyne *et al.* 2014). It is therefore our pleasure to present several interesting studies that look into a range of research questions from different angles. O'Donovan *et al.* (2015) introduce new expert consensus panel guidelines on geriatric assessments in oncology. As a result of their Delphi study, the expert panel recommends criteria that should be included when introducing CGAs in a clinical geriatric oncology programme in Ireland. Their findings should be transferrable to many other countries and health systems (O'Donovan *et al.* 2015). Chau *et al.* (2015) and Qiu *et al.* (2015) both conducted traditional clinical trials comparing younger and older patients. The latter study looks at differences in clinicopathological features and prognosis of triple-negative breast cancer (TNBC) between younger (<60 years old) and elderly (≥60 years old) patients. They emphasise that physicians need to be careful when choosing adjuvant treatments for older patients with TNBC. The retrospective nature of their study and the definition of TNBC is a limitation of the study, and there is definitely a need for more research (funding) in this area in the future so that prospective trials are possible in older patients (Qiu *et al.* 2015). Chau *et al.* (2015) address clinical outcomes following neoadjuvant cisplatin-based chemotherapy for bladder cancer in both subgroups. They suggest that older patients receiving neo-adjuvant chemotherapy followed by cystectomy or radiotherapy can show similar clinical outcomes as younger patients if they present with a good functional ability and limited comorbidities (Chau *et al.* 2015). A major caveat in this and many other studies is that a CGA was not included and that the population under study may not be applicable to other (more vulnerable) older patient populations. Indeed, implementation of CGA in daily practice will not only benefit patients directly, but also indirectly since one can anticipate a better quality of future prospective and retrospective clinical research. Even in the case where the implementation of a CGA in daily practice is not possible due to economic reasons, we do would strongly advocate to implement a minimal assessment under the form of a

G8 score. This simple and reliable (screening) instrument has on its own the capacity to identify vulnerable patients and has a strong prognostic value for functional decline and overall survival (Kenis *et al.* 2013). The study of Hamama-Raz *et al.* (2015) aimed at exploring whether patients' QoL and functional dependence could have a reciprocal effect on each other over time. Interestingly, it showed that an assessment of QoL can predict functional decline in older cancer patients receiving treatment

(Hamama-Raz *et al.* 2015). Lastly, Bol *et al.* (2015) addressed website satisfaction and recall of online cancer information in older colorectal cancer patients and indicate that there is also great potential for e-health in this patient population (Bol *et al.* 2015).

In conclusion, we argue that the time to integrate geriatric oncology into our daily practices has arrived. It is another paradigm of multidisciplinary cancer care that will gain further importance in the near future.

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